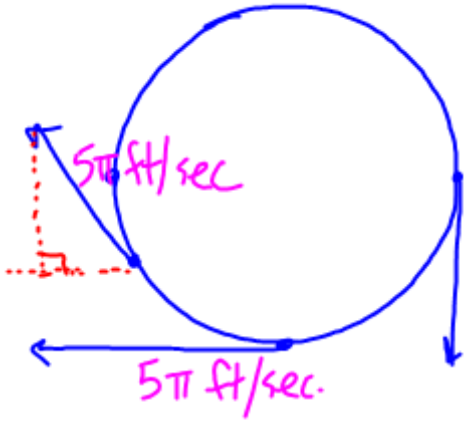
(1) What is the angular velocity?

$\omega = \frac{\theta}{t} \rightarrow \frac{\pi}{20}$ rad/sec.

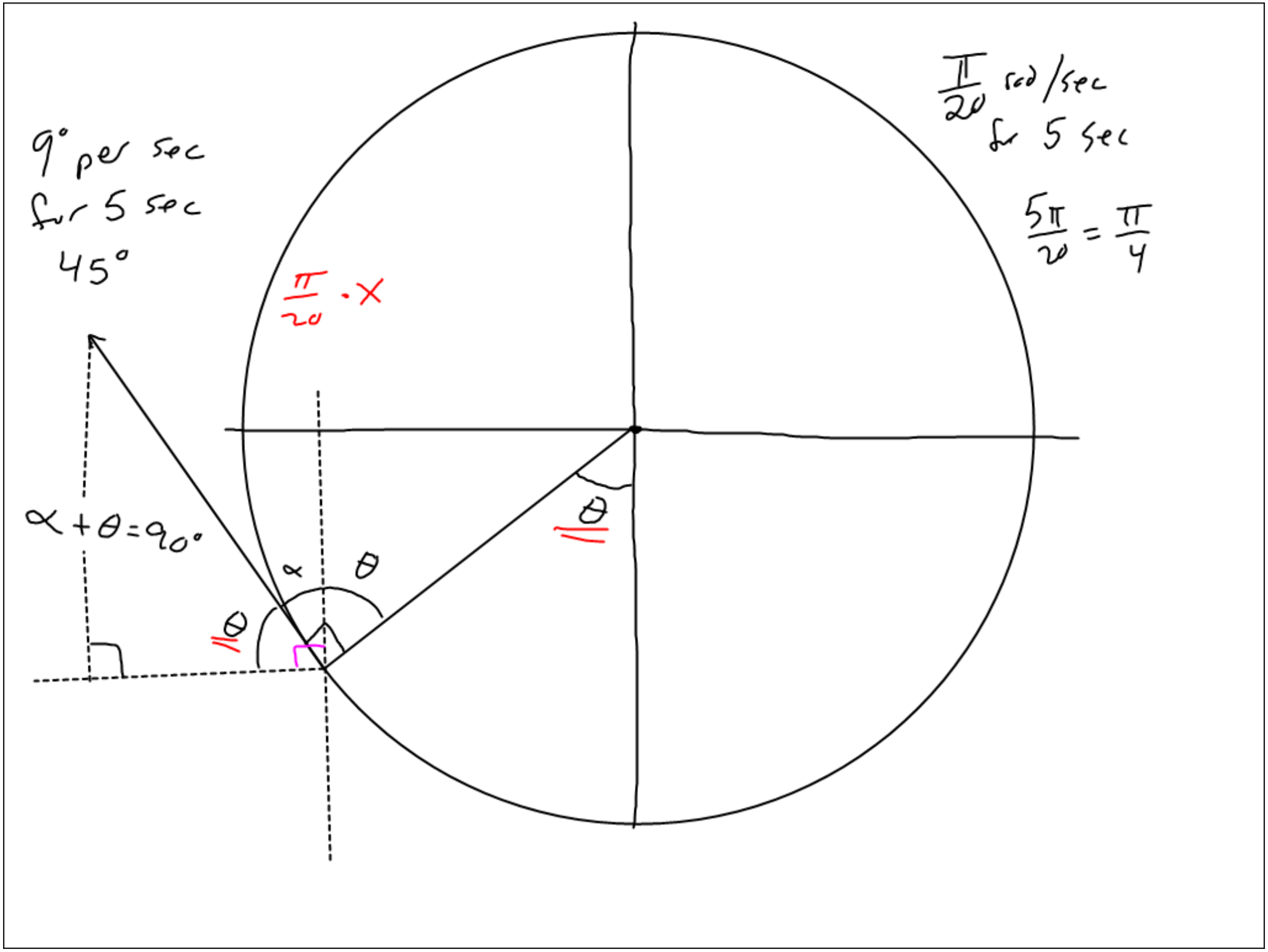
(2) What is the linear velocity?

$5\pi \simeq 15.7$ ft/sec.



(3) Complete the table

Wait Time	Angle	Horz. comp. of vel.	vert. comp. of vel
5	45°	$-11.1\ (5\pi \cos 45)$	$5\pi \sin 45°$ 11.1
10	90°	0	5π
15	45°	11.1	11.1
20	0°	5π	0

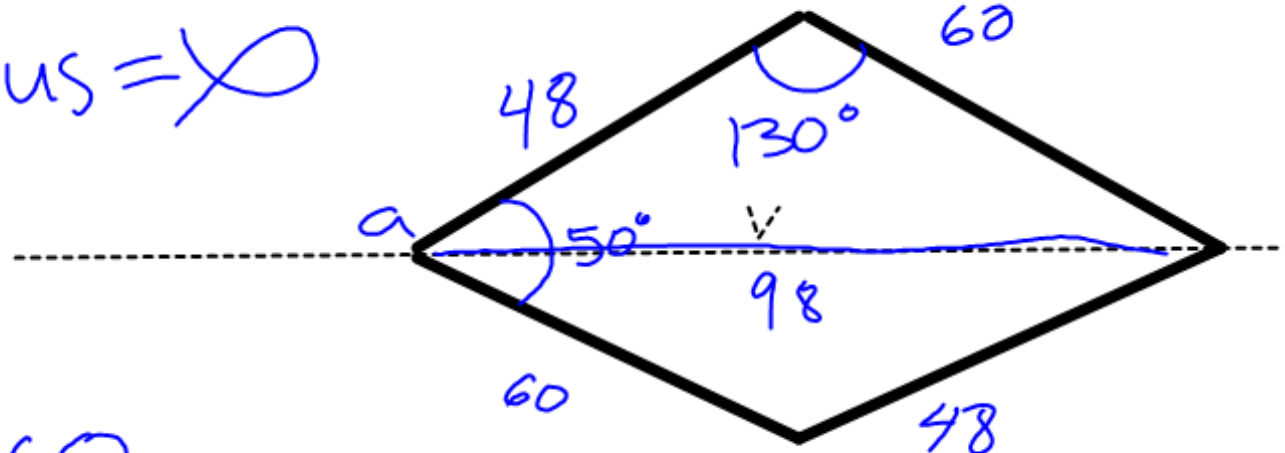

9° per sec
for 5 sec
45°
π/20 · X
π/20 rad/sec
for 5 sec
5π/20 = π/4
α + θ = 90°
α
θ
θ
θ

Horz./Vert. Component of velocity

Due Thursday

- Equations
  - Vert. velocity equation + defined (2 pts)
  - Horz. velocity equation + defined (2 pts)
- Explained
  - Why/How do we use 5π (15.7)? (1 pt.)
  - Why/How do we use sine/cosine? (1 pt.)
- Test
  - How do you test your equations? (1 pt.)
  - Why those pts? (1 pt)

Jesus = X



6

$\frac{98}{\sin 130} = \frac{60}{\sin CAB}$ $V^2 = 48^2 + 60^2 - 2(48)(60)\cos 130$

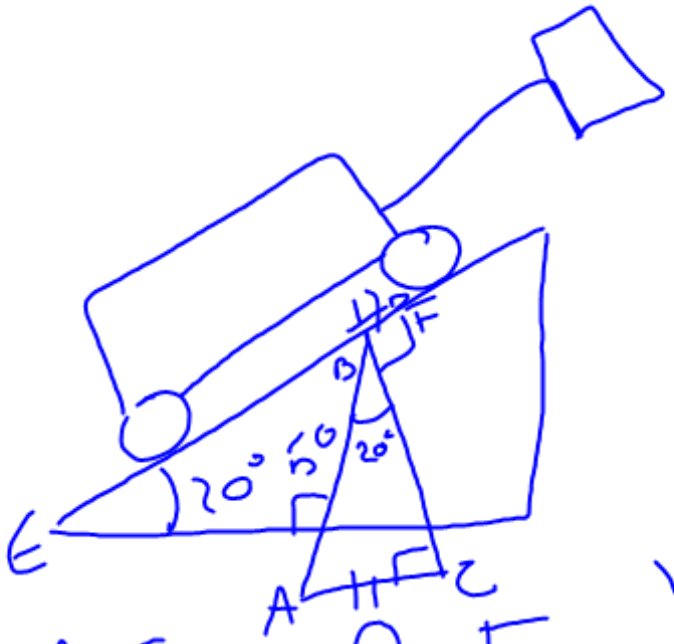
$\sin CAB = .469000$ $|V|^2 = 9604.5$

$CAB = 28°$

$V = 98$

11

Finally $a \approx 180 - 28 = 152°$



$AC = BF$

$y = a \sin \theta$

$a = 50$

$\theta = 20°$

$y = 50 \sin 20°$

$y \cong 17$

- Sect. 7.5

  #1, 3, 9, 10, 15, 21, 28, 29

- write up due Thurs.